

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) An information recording apparatus, comprising:

a recording device for recording record information, by irradiating laser light with a variable recording power, onto an information recording medium comprising: a first recording layer into which the record information is recorded; and a second recording layer into which the record information is recorded through said first recording layer;

a calculating device for recording test information for test writing by irradiating said second recording layer with the laser light through a recording area in which the record information is unrecorded in said first recording layer with said recording device, to thereby calculate an optimum power of the laser light in recording the record information by irradiating said second recording layer with the laser light through a recording area in which the record information is already recorded in said first recording layer; and

a controlling device for controlling said recording device to irradiate the laser light with the optimum power calculated by said calculating device, in recording the record information into said second recording layer,

wherein said calculating device calculates the optimum power by correcting correlation information which indicates a correlation between reproduction quality of the test information and the recording power.

2. (canceled)

3. (currently amended) The information recording apparatus according to claim-2_1, wherein said calculating device corrects the correlation information, on the basis of a difference between a feature of the laser light irradiated through the recording area in which the record information is unrecorded in said first recording layer and a feature of the laser light irradiated through the recording area in which the record information is already recorded in said first recording layer.

4. (currently amended) The information recording apparatus according to claim-2_1, wherein

transmittance for the laser light is reduced in said first recording layer by recording the record information therein, and

said calculating device corrects the correlation information to make the calculated optimum power greater than an optimum power indicated by the correction information before the correction.

5. (currently amended) The information recording apparatus according to claim-~~2~~1, wherein

transmittance for the laser light is increased in said first recording layer by recording the record information therein, and

said calculating device corrects the correlation information to make the calculated optimum power less than an optimum power indicated by the correction information before the correction.

6-9. (canceled)

10. (currently amended) An information recording method in an information recording apparatus, comprising:

a recording device for recording record information, by irradiating laser light with a variable recording power, onto an information recording medium comprising: a first recording layer into which the record information is recorded; and a second recording layer into which the record information is recorded through said first recording layer,

said information recording method comprising:

a calculating process of recording test information for test writing by irradiating said recording layer with the laser light through a recording area in which the record information is unrecorded in said first recording layer with said second recording device, to thereby calculate an optimum power of the laser light in recording the record information by irradiating said second recording layer with the laser light through a recording area in which the record information is already recorded in said first recording layer; and

a controlling process of controlling said recording device to irradiate said second recording layer with the laser light, with the calculated optimum power and through the recording area in which the record information is already recorded in said first recording layer, in recording the record information into said second recording layer,

wherein said calculating process calculates the optimum power by correcting correlation information which indicates a correlation between reproduction quality of the test information and the recording power.

11. (canceled)

12. (new) The information recording apparatus according to claim 1, wherein said controlling device controls said recording device to irradiate the laser light having a predetermined waveform which is different from a waveform of the laser light for recording the test information.